Before the
Federal Communications Commission
Washington, D.C. 20554

In the Matter of	)	
	)	
Implementation of Sections 309(j) and 337 of the Communications Acts of 1934 as Amended	)	WT Docket No. 99-87
	)	
	)	
Promotion of Spectrum Efficient Technologies on Certain Part 90 Frequencies	)	RM-9332
	)	
	)	

REQUEST FOR WAIVER OF COMMISSION RULES
ON BEHALF OF
NEW YORK CITY TRANSIT AUTHORITY

The New York City Transit Authority ("Authority"), pursuant to Sections 1.3 and 1.925 of the Federal Communications Commission's ("FCC" or "Commission") rules, hereby respectfully requests a waiver and extension of the January 1, 2013 deadline by which the Authority, as a licensee of private land mobile radio services in the 150-174 MHz and 421-512 MHz (VHF/UHF) bands, must migrate to narrowband (12.5 kHz or narrower) technology.[1]

As discussed more fully below, the Authority believes this request satisfies the requirements for relief set forth in the Commission's rules and recent guidance to licensees seeking waiver and extension of the narrowband deadline. As the largest public transportation

[1] *See Implementation of Sections 309(j) and 337 of the Communications Act of 1934 as Amended*, Second Report and Order and Second Further Notice of Proposed Rulemaking, WT Docket No. 99-87, RM-9332, 18 FCC Rcd 3034 (2003); *Implementation of Sections 309(j) and 337 of the Communications Act of 1934 as Amended*, Third Memorandum Opinion and Order, Third Further Notice of Proposed Rule Making and Order, WT Docket No. 99-87, RM-9332, 19 FCC Rcd 25045 (2004); *Implementation of Sections 309(j) and 337 of the Communications Act of 1934 as Amended*, Order, WT Docket No. 99-87, RM-9332, 25 FCC Rcd 8861 (2010); 47 C.F.R. §§ 90.203(j), 90.209(b). The January 1, 2013 deadline will be referred to herein as the "narrowband deadline." This waiver request is consistent with the Public Notice issued by the Commission on July 13, 2011, providing guidance on the submission of requests for waiver of the narrowband deadline. *See Wireless Telecommunications Bureau, Public Safety and Homeland Security Bureau, and Office of Engineering and Technology Provide Reminder of January 1, 2013 Deadline for Transition to Narrowband Operations in the 150-174 MHz and 421-512 MHz Bands and Guidance for Submission of Requests for Waiver and Other Matters*, Public Notice, 26 FCC Rcd 9647 (2011) ("*Public Notice*").

agency in North America, the Authority has spent considerable time and money carrying out a comprehensive program designed to ensure that its vital subway communications will not be compromised during the transition from wideband to narrowband technology. Despite the Authority's good faith efforts to meet the Commission's deadline, the enormous scope of the narrowband project, coupled with unusual circumstances beyond the Authority's control, will prevent the Authority from transitioning to narrowband technology by January 1, 2013. The Authority believes that the size and complexity of the public transportation system in New York City ("City" or "NYC") alone constitute unique and unusual circumstances that would make application of the deadline in this instance inequitable, unduly burdensome, and contrary to the public interest. Moreover, imposing the deadline on the Authority under these circumstances would result in considerable harm to the City's metropolitan area residents, millions of whom rely on the Authority daily to provide uninterrupted and reliable transportation service. As the Authority has no reasonable alternative, it respectfully asks the Commission to grant this waiver request and extend the deadline by which the Authority must migrate to narrowband operations.

I. Background of Applicant

The Authority, a public benefit corporation created by the Public Authorities Law of the State of New York to operate a vast subway and bus transportation network in NYC, is the nation's largest provider of mass transit services.[2] Operating 24 hours per day, 7 days per week, 365 days per year, the Authority's transportation network typically makes more than 8,000 scheduled subway train trips and transports more than six million customers (approximately 4.5 million of whom ride the subway) each single workday. In addition to its regular delivery of essential mass transit services, the Authority's bus and subway operations serve NYC as a

[2] *See* mta.info | About New York City Transit, *at* http://www.mta.info/nyct/facts/about_us.htm.

critical resource in times of emergency, such as in the evacuation of residents from low-lying areas of the City in advance of Hurricane Irene this past summer.[3] The New York State ("NYS") Legislature has explicitly recognized that the Authority provides an essential governmental service that is critical to the residents and economy of NYC and the greater metropolitan region.[4] Indeed, a brief interruption of service in 2005 caused by a transit employee strike resulted in losses to the City and its economy estimated in the billions of dollars.[5]

The Authority's need for uninterrupted voice communications over the subway radio network is self-evident. Without continuous and reliable radio communications service, the Authority cannot ensure the safe operation of its mass transit facilities. As the Commission has already recognized that the Authority's services are "vital to [the] health and safety of [the] community,"[6] the Commission is no doubt aware of how essential safe, secure and reliable radio communications are to the Authority in fulfilling its mission.

II. Scope of Waiver Request

The Authority has undertaken an extensive, multi-year program to modernize and upgrade its VHF subway radio system ("Subway Radio System"). Upon completion of the program, the Subway Radio System will be fully compliant with the FCC's narrowband requirements, and will be capable of further transitioning to a 6.25 KHz equivalent technology in the future (subject to an additional capital project). The Authority submits this waiver request with respect to communications equipment deployed on the Authority's Rapid Transit

[3] *See* mta.com | MTA Statement on Hurricane Irene, *at* http://www.mta.info/news/stories/?story=350.
[4] *See* N.Y. Public Authorities Law § 1202(2) (McKinney 2007).
[5] *See* Charles Herman, *New York Transit Strike May Cost Billions*, ABC News (Dec. 20, 2005), *at* http://abcnews.go.com/US/Business/story?id=1425576#.Tt_d9bIk4qQ.
[6] *New York City Transit Authority*, Memorandum Opinion and Order, 3 FCC Rcd 5621 ¶ 8 (Private Radio Bureau, Aug. 31, 1988) (recognizing the Authority's "system is a unique one, involving the safety of millions of passengers on thousands of buses").

Operations ("RTO") subway system using the licenses and frequencies set forth in Appendix A.[7] No waiver is necessary or sought with respect to the Authority's bus service radio operations and licenses, as these systems operate in bands other than the affected VHF and UHF bands.

III. The Authority Satisfies the Requirements to Obtain a Waiver and Extension of Time to Satisfy the Narrowband Deadline

Under the applicable rules, as well as the Commission's recent guidance set forth in the *Public Notice*, the Authority believes it is entitled to a waiver and extension of the narrowband deadline. Pursuant to Section 1.925 of the Commission's rules, the Commission may waive the application of a rule if the party seeking such waiver establishes (i) that the "underlying purpose of the rule[] would not be served or would be frustrated by application to the instant case, and that grant of the waiver would be in the public interest;" or (ii) that, "[i]n view of the unique or unusual factual circumstances of the instant case, application of the rule[] would be inequitable, unduly burdensome or contrary to the public interest, or the applicant has no reasonable alternative."[8] Additionally, under Section 1.3 of the Commission's rules, the Commission may suspend, revoke, amend, or waive any rule for "good cause shown."[9]

The Commission has identified a variety of factors that will be relevant to its analysis under Section 1.925 of whether a licensee is entitled to a waiver of the narrowband deadline. These factors include: (1) the steps the licensee has taken to plan for, initiate, and complete the transition to narrowband operations; (2) the size and complexity of the relevant communications system; (3) whether system equipment is narrowband-capable or must be replaced or upgraded; (4) whether the licensee plans additional system upgrades or improvements in addition to

[7] Currently, five channels of the Subway Radio System are used by the Transit Bureau of the Police Department of the City of New York ("NYPD Transit Bureau") for voice communications in the underground subway environment and along the rights-of-way of the elevated subway system. *See infra* Section III.F.

[8] 47 C.F.R. § 1.925(b)(3)(i)-(ii).

[9] *Id.* § 1.3.

converting to narrowband operation; (5) the funding sources, including whether the licensee's budget requires government approval or a multi-year budget process; (6) whether the licensee's narrowbanding schedule is affected by neighboring systems due to interoperability relationship or other interdependencies; and (7) the licensee's plans to minimize the negative impact of extended wideband operations on co-channel and adjacent channel operations.[10]

With respect to the Authority, each of these factors strongly militates in favor of granting waiver relief. For years, the Authority has worked diligently and purposefully to migrate its communications systems to narrowband technology, and has taken significant steps to that end. However, the highly unique and unusual circumstances in this case—*i.e.*, (i) the Authority's obligation to maintain continuous and reliable transportation service in the most populated city in the United States, while replacing the essential communications facilities used in one of the largest and most complex subway systems in the world, and (ii) actions beyond the Authority's control that delayed the awarding of the contract to complete the narrowband transition—justify a waiver and extension of the January 1, 2013 deadline.

A. Steps Already Taken to Plan for, Initiate, and Complete the Transition to Narrowband Operations

Approximately ten years ago, the Authority initiated its upgrade to the Subway Radio System, which included the migration to narrowband technology (the "Narrowband Project"). This early initiation of the Narrowband Project followed from the Authority's recognition that a project of such scope and complexity would not only require substantial time and money (with construction and equipment costs in excess of $100 million and overall project costs in excess of $200 million), but would also present significant engineering and procurement-related challenges. Accordingly, the Authority designed the Narrowband Project to ensure the

[10] *See Public Notice*, 26 FCC Rcd at 9646.

development and construction of a modern and robust radio system that would also meet the FCC's requirements for spectrum efficiency.

In addition to conducting the necessary preliminary planning for the Narrowband Project, the Authority has taken the following steps to plan for, initiate, and complete the transition to narrowband operations:

- Between 2003 and 2005, the Authority procured 7,000 portable handheld radios that could be programmed in both wideband and narrowband modes.[11]

- In 2006, the Authority issued a request for information ("RFI") to identify potential vendors and system integrators capable of completing a project of such magnitude and complexity, with the technical expertise to provide narrowband radio and base station equipment in a mass transit environment.[12] Following the RFI, the Authority received responses from five potential project participants.

- From late 2006 through June 2007, the Authority developed a master plan to migrate affected base stations from wideband to narrowband operations. The size, complexity and architecture of the NYC subway system[13] mandated that great care be exercised in the implementation of the system upgrade, and required extensive pre-engineering planning and careful consideration of the Authority's engineering objectives, as well as operational, safety and security concerns.

- From mid-2007 through mid-2008, the Authority conducted preliminary and final engineering for the system upgrade and migration. At that time, the Authority expected to award the contract in late 2008, and believed that an aggressive construction period beginning at that time might enable the Authority to complete the narrowband transition by or soon after January 1, 2013.

- In mid-2008, the project's procurement methodology changed from a "low bid" method of procurement, with detailed engineering and technical specifications developed by the Authority – wherein price was the sole criterion for award – to a "request for proposals" ("RFP") method of procurement that would enable greater flexibility in the selection of a proposer based upon criteria addressing expertise, experience, technical approach, project schedule, price, system innovations and other factors directed towards selecting the proposal that best satisfied the project's relevant requirements and offered the best value for this costly major system upgrade. Although this shift in procurement methodology caused an upfront delay in developing additional and revised specifications and contractual

[11] Contract W32668.
[12] RFI 06N02.
[13] *See infra* Section III.B.

terms, the belief was that the long-term benefits of this approach would counter-balance the negative effect of the delay.

- From mid-2008 through November 2009, the Authority revised the engineering specifications to facilitate broader competition and encourage alternative approaches to completing the Narrowband Project. After developing and approving the final RFP documents and technical specifications, the Authority advertised the RFP and invited all proposers submitting responses to the RFP to address how they would accelerate completion of the narrowband transition.[14] By that time, the Authority recognized that full compliance would not likely be achieved by January 1, 2013.

- In February 2010, three proposers responded to the RFP by providing proposals to the Authority.

- In the spring and summer of 2010, the Authority conducted technical reviews with, received oral presentations from, entered into negotiations with, and received the best and final offers from, the responding proposers.

- In fall 2010, the Authority's Board approved the contract award to a proposer. However, in December 2010, following its review of the contract award, the NYS Comptroller, which has authority to approve or reject certain contract awards entered into by the Authority,[15] declined to approve the contract based upon the conduct of the chosen proposer in connection with its performance of an unrelated City contract.[16]

- In December 2010, the Authority procured more than 8,000 additional portable handheld radios, programmed for both wideband and narrowband modes, to address normal replacement needs.[17]

- As a result of the NYS Comptroller's rejection of the proposed contract award, the Authority was left with no reasonable alternative but to reject all of the initial RFP responses and commence the re-advertising of the RFP (the "Readvertised RFP"). The Authority's Board authorized staff to take such action in early 2011.

- In 2011, the Authority commenced the solicitation, negotiation and selection process for the Readvertised RFP, and received the best and final offers in early October 2011. To further the Commission's goal of achieving spectrum efficiency and in recognition of its obligation not to interfere with other FCC

[14] RFP W32686. Because the RFP contains sensitive information regarding security and infrastructure, it is not publicly available.

[15] *See* N.Y. Public Authorities Law § 2879-a (McKinney 2011).

[16] *See* Letter of Charlotte E. Breeyear, Director, Bureau of Contracts, State of New York Office of the State Comptroller, to Samuel Schaffner, Assistant Chief Procurement Officer, New York City Transit Authority – Material Division (Dec. 21, 2010).

[17] Contract W32555.

licensees, the Authority revised the specifications in the Readvertised RFP to require the chosen proposer to commit to staging and completing all work related to the Narrowband Project so that above-ground transmitter sites would be completed first, while below-ground transmitter sites (i.e., those in the subway environment) would be completed thereafter. Under such an approach, outdoor radio transmissions would be conducted in narrowband mode as soon as possible, thereby minimizing potential interference to other licensees, and maximizing compliance with the Commission's directives for spectrum efficiency.

- At its October 2011 meeting, the Authority's Board approved the award of the Narrowband Project contract to Alcatel-Lucent USA, Inc.[18] In early November 2011, the Authority delivered the contract and related procurement materials to the NYS Comptroller's office for approval, a process which is estimated to take about 90 days, until approximately February 2012. If the NYS Comptroller approves the proposed contract award, the Authority will issue a notice of award commencing the contractual schedule for completion of the Narrowband Project.

B. System Size and Complexity

Few transit properties around the world are as large and complex as the Authority's subway system, parts of which date back more than 100 years. The system consists of:

- Three separate systems (known as the IRT, BMT, and IND subway lines), two of which were operated by privately-owned companies before their acquisition by NYC, with many routes that converge and diverge in a complex route structure servicing 468 passenger stations. The existing Subway Radio System uses wideband VHF radio frequencies from the Industrial/Business Pool – Conventional (IG) Radio Service as well as the Public Safety Pool – Conventional (PW) Radio Service.[19] The Authority's configuration uses one frequency pair assigned to each of the subway lines.

- 800 miles of track traversing four boroughs of NYC, including 13 under river tunnels. Approximately 440 miles of track are underground, with the remaining miles of track located on elevated structures, outdoor at grade, in viaducts, or through open cuts.

- 119 radio sites, of which 83 are underground and 36 are outdoors.[20] The Authority has conducted extensive site surveys in connection with planning the work at each radio site location.

[18] MTA and New York City Transit Authority Board Agenda for Meeting of October 26, 2011, pp. 105, 110 and 111.
[19] *See* Appendix A.
[20] Equipment for the NYPD Transit Bureau is located at all these sites.

- Multiple base stations and a network of remote receivers located at the 119 radio sites. This equipment communicates to sections of the right-of-way through radiating antenna cable underground and geographically separated transmitting antennae outdoors. The underground system includes over 230 miles of radiating antenna cable connected to the 83 underground radio sites.

- Replacement of telecommunications and network equipment at the RTO control center and back-up command center locations, as well as infrastructure work, such as upgrades in communications rooms throughout the system. Other critical work must be performed to integrate all portions of the Subway Radio System.

Conductors, train operators, tower operators and other personnel use the Authority's complex radio communications network to ensure the provision of safe and efficient transportation services to millions of subway passengers daily. Transit professionals and users alike recognize the City's subway system as one of the largest and most complex systems in the world, and one of the few that does not completely shut down on a daily basis for system maintenance and regular capital improvements. To manage such a large and complex system, the Authority must carefully plan, coordinate, and implement all major network upgrades, particularly those requiring the total replacement of radio equipment, such as the narrowband migration at issue.

C. Whether System Equipment is Narrowband Capable or Must Be Replaced or Upgraded

Due to the age of the RTO equipment—most of it dating back thirty years or more—the Authority cannot make simple technical modifications to comply with the FCC's narrowband requirements. Instead, compliance requires the Authority to replace all radio equipment and devices used for communications in the RTO VHF radio system. As noted in Section III.A, the Authority has already taken a number of steps to comply with the narrowband rules. Even before the Commission imposed such requirements, between the late 1980s and the mid-1990s, the Authority installed radiating antenna cable throughout the subway system at a significant

capital investment cost. Moreover, as noted above, the Authority has already procured thousands of portable and replacement radios capable of operating in narrowband mode on the Subway Radio System. Nevertheless, the Authority must still replace and reprogram radio base stations and related site equipment throughout the entire mass transit system.

D. Whether the Licensee Plans Additional System Upgrades or Improvements in Addition to Converting to Narrowband Operation

The Narrowband Project is part of an extensive Subway Radio System upgrade project that will address virtually all RTO radio equipment utilized on the Subway Radio System (the "SRS Project"). Because there are no available VHF channels in the NYC area that could be used to transition from wideband to narrowband operation while the SRS Project is ongoing, the only way compliance with the FCC mandate could be achieved was to intertwine the narrowband transition with the completion of the SRS Project.

E. Funding Sources, Including Whether the Licensee's Budget Requires Government Approval or a Multi-Year Budget Process

The Authority's implementation of narrowband technology is funded by bond proceeds generated for a capital improvement program of the Metropolitan Transportation Authority ("MTA"), intended to benefit the Authority and affiliated agencies.[21] Initiated in the early 1980s, the MTA capital program is subject to periodic review, approval and reauthorization by the NYS Legislature.[22] The overall cost of the Narrowband Project (including engineering and

[21] MTA is a public benefit corporation created by the NYS Legislature responsible for the planning, development and implementation of a unified mass transportation policy for the greater New York commuter transportation region, including, through its subsidiaries, operation of two commuter railroads. N.Y. Public Authorities Law, §§ 1260 et seq. One out of three people who use mass transit in the United States does so on a facility operated by an MTA-subsidiary or MTA-affiliated agency.

[22] In 1981, the NYS Legislature, recognizing that a "transportation emergency" affecting NYC and the greater metropolitan region existed because of "inadequate levels of capital replenishment over a long period of time," authorized, as "an imperative matter of state concern," a program to finance capital investments to sustain the vital transportation infrastructure in the commuter region, principally through authorizing the issuance by the MTA of capital improvement bonds. *See* legislative findings contained in the 1981 legislation authorizing the first MTA Capital Improvement Program, L.1981, c. 314 (McKinney's New York Session Laws). Following the initial five-

inspection costs, construction contract costs, and other expenses) is expected to exceed $200 million.

F. Whether the Licensee's Narrowbanding Schedule is Affected By Neighboring Systems Due to Interoperability Relationships or Other Interdependencies

As a general matter, the Authority's narrowbanding schedule is not dependent upon other neighboring systems because of interoperability relationships or other interdependencies. However, the Narrowband Project will include the modernization and upgrade of transmitters used by the NYPD Transit Bureau that are co-located with the Authority's equipment.[23] The Authority expects that in the near future, the NYPD Transit Bureau will transition to its own UHF radio system, in conjunction with a police communications signal booster system previously designed and constructed for the NYPD Transit Bureau. However, if the NYPD Transit Bureau has not migrated to its own UHF system before the Authority completes the narrowband transition, the NYPD Transit Bureau will use narrowband-capable portable radios to continue voice communications on the upgraded Subway Radio System.

G. Plans to Minimize the Negative Impact of Extended Wideband Operations on Co-Channel and Adjacent Channel Operations, Including a Description of the Spectrum Environment in the Affected Area

The Authority has taken a number of steps to minimize the negative impact of extended wideband operations on adjacent channel operations. As noted in Section III.A, the Readvertised RFP was drafted to require the chosen proposer to complete the staging and installation work on

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year capital improvement program, the NYS Legislature has authorized revised and continuing programs to invest in the transportation network. *See* legislative history contained in the annotations to the MTA authorizing statutes, N.Y. Public Authorities Law, §§ 1260 et seq.

[23] The Police Department of the City of New York ("NYPD") is an agency of NYC that is a separate and distinct legal and governmental entity from the Authority. In the mid-1990s, the Authority's Transit Police Department was merged with the NYPD, which created the NYPD Transit Bureau, a bureau of the NYPD with expertise in, and responsibility for, policing the subway system. *See* NYPD Transit Home, at http://www.nyc.gov/html/nypd/html/transit_bureau/transit.shtml. The Authority has already designed and constructed for NYPD an off-the-air channelized bi-directional signal booster system that uses the current underground antenna infrastructure. This police communications system allows the NYPD Transit Bureau to use selected channels on the NYPD's own radio system in the underground subway environment.

the narrowband migration for above-ground transmitter sites first. Thereafter, the contractor can turn to migration of the below-ground transmitter sites located in the subway, which are unlikely to give rise to interference because of the propagation constraints in an underground environment. This approach will enable the Authority to make outdoor radio transmissions using narrowband technology as soon as possible, and minimizes the risk of potential interference to operators on nearby spectrum. Moreover, the awarded contract now awaiting approval from the NYS Comptroller requires the chosen contractor to complete the initial test of the base stations and related equipment within 18 months of the notice of award. In view of these considerations, the Authority is confident that it can conduct its operations and transition to a narrowband platform without negatively impacting adjacent channel operations.[24]

H. If the Licensee Plans to Migrate to a Non-VHF/UHF Band, Whether It Will Relinquish VHF/UHF Spectrum Once It Has Migrated and the Amount of Spectrum to be Relinquished

Because the Authority does not plan to migrate to a non-VHF/UHF band, this factor is not applicable.

IV. Proposed Timetable for Completion of Narrowbanding

The *Public Notice* directs licensees seeking waiver and extension of the narrowband deadline to provide a proposed timetable for completion of narrowbanding that includes a description of the steps that have been, or will be, taken prior to January 1, 2013, and the dates on which the licensee expects to commence and complete the replacement or retuning of mobiles/portables and the infrastructure.[25] Despite the Authority's diligent and sustained efforts

[24] New York Stock Exchange, Inc. (the "NYSE") is the only licensee in the NYC metropolitan area that is licensed to use a frequency that is also licensed to the Authority. *See* Radio Station Authorizations of New York Stock Exchange, Inc., FRN 0005068382, Call Sign WPZP617 (eff. Feb. 13, 2004). The NYSE operates on 151.190 MHz in the Industrial/Business Pool – Conventional (IG) Radio Service, while the Authority allows the NYPD Transit Bureau to use this frequency in the Public Safety Pool – Conventional (PW) Radio Service. *See* Appendix A.

[25] *Public Notice*, 26 FCC Rcd at 9649.

to meet the FCC's narrowband deadline, the magnitude and complexity of the Narrowband Project, and the unusual factors noted above that prevented the timely awarding of the narrowbanding contract, have made the Authority's initial and revised migration plans and schedules no longer viable. Although the proposed timetable set forth below is ambitious, the Authority believes that it can be met if other factors beyond the Authority's control do not further impede the contract award or network deployment.

A. Steps Taken Prior to January 1, 2013

As noted in Section III.A, for nearly ten years, the Authority has performed substantial planning, engineering, design and procurement-related work to promote and further the Narrowband Project. Indeed, the *commencement* dates for the replacement of mobiles/portables and the infrastructure have already occurred. Not only has the Authority procured approximately 15,000 portable handheld radio devices that are capable of operating in narrowband mode, it (i) issued an RFI to identify potential proposers capable of effectuating the technical migration, (ii) developed an initial master plan to migrate the base stations from wideband to narrowband operations, (iii) conducted preliminary and final engineering for the system upgrade and migration, (iv) issued an RFP to identify additional potential system and service providers, (v) reviewed and revised the engineering specifications to encourage competition and find alternatives to implementing narrowband technology, (vi) assessed initial proposals and identified a proposer to which the contract would be awarded, (vii) issued a Readvertised RFP (with revised specifications and contract terms) to identify additional proposals, and (viii) assessed the proposals submitted in response to the Readvertised RFP and approved a contract award to one of the responding proposers, which now awaits approval from the NYS Comptroller. The Authority expects the contract award to be finalized on or about February 1,

2012. The foregoing actions were neither trivial nor perfunctory. Rather, they manifest the considerable time and effort that the Authority has devoted to meeting the established narrowband deadline.

Additionally, the Authority has identified the equipment that will be needed for an initial system integration and environmental test of four IRT Base Stations (two underground and two outdoor base stations) (the "Initial Build/Deployment"), which must be successfully completed before further progress on the project can occur. The Initial Build/Deployment is estimated to take up to 18 months because of the complexities involved and the tasks that must be accomplished. The goal of the Initial Build/Deployment is to conduct full process and equipment environmental testing and related "shakedown" activities to provide sufficient confidence that the ultimate system integration, which must meet all performance specifications, can be successfully accomplished in a manner that minimizes operational risks, delays and surprises during full system-wide deployment or ensures that such challenges can be readily addressed and mitigated. The Narrowband Project is not a simple "buy-and-replace equipment" project. Rather, most of the work must be conducted along an active right-of-way under service diversions or other partial shut-downs in order to return the subway system to train traffic before the next "rush hour" period commences. The Subway Radio System requires the contractor to develop a custom equipment solution which integrates off-the-shelf products into hardened equipment cabinets, such that the sites will be able to function in the rigors of a subway (outdoor and indoor track) operating environment. The goals of the Initial Build/Deployment are as follows:

1. Finalize all manufacturing processes, equipment, and procedures;
2. Finalize all factory acceptance documentation;
3. Complete First Article Environmental Testing of an integrated VHF Radio Cabinet ("VRC") at an independent lab;

4. Finalize all on-site installation, test, and acceptance processes and procedures;
5. Provide all telecommunications network connectivity at the Subways Rail Control Center and the Back-up Control Center to support the Initial Build/Deployment;
6. Install fully operational integrated VRCs at 4 locations;
7. Evaluate and verify all design and operational scenarios; and
8. Finalize cutover procedures from wideband to narrowband and the communications network

The timing and completion of the Initial Build/Deployment may be affected by a variety of factors. First, the regular radio communications operations of RTO and the NYPD Transit Bureau must take a higher priority to preserve the safe and efficient operation of the mass transit system. Moreover, work related to the rights-of-way must be coordinated with other, ongoing subway projects to ensure that the subway transportation system as a whole meets public needs while construction activities are ongoing. Finally, failures may require equipment redesign before proceeding, and evaluations may be extended or repeated in extreme cases.

Following the successful completion of the Initial Build/Deployment, the outdoor sites may be completed and tested in accordance with the schedule set forth below, and the Authority can reprogram its mobile radios to function in a narrowband mode when subway trains operate outdoors. Thereafter, the Authority will implement narrowband technology in its underground facilities on a subway line basis (IRT/BMT/IND), consistent with the schedule set forth below.

B. Anticipated Dates for Completion or Replacement of Portable Radios and Infrastructure Replacement

The replacement and modification of base station and transmitter equipment is expected to be performed in accordance with the following schedule, *assuming that the NYS Comptroller approves the proposed contract award on a schedule that enables issuance of a notice of award on or before February 1, 2012*.

Tentative Award Date	February 1, 2012
Initial Build/Deployment	July 31, 2013

Above-Ground Installations and Test On All 3 Subway Lines (IRT/BMT/IND)	August 31, 2014
8 NYPD Transmitter Site Installations and Test	August 31, 2014
IRT Underground Location Installations and Test	March 31, 2015
BMT Underground Location Installations and Test	August 31, 2015
IND Underground Location Installations and Test	May 31, 2016
Substantial Completion of Project	June 30, 2016

Should the Commission so require, the Authority is prepared to commit to providing periodic reports on its progress in meeting these projections.

C. Additional Considerations

In consideration of the Commission's ultimate goal of achieving additional spectrum efficiency, the Authority has required that equipment provided under the Narrowband Project contract be capable of future upgrade to 6.25 KHz equivalent operation on a 12.5 KHz channel. However, to fully implement such technology, the Authority will be required to carry out another capital project to replace the head end communications console equipment at the Authority's radio control centers.

V. Conclusion

For the reasons set forth herein, the Authority believes it satisfies all of the FCC's requirements for granting a waiver and extension of the narrowband deadline. The Authority appreciates the Commission's concerns regarding spectrum efficiency and has worked diligently for years to transition its Subway Radio System to a narrowband platform. However, delay in meeting the deadline has become inevitable due to (i) the size and complexity of the Authority's radio system, (ii) unanticipated factors that the Authority could neither have predicted nor controlled, particularly with regard to the NYS Comptroller's denial of the initial project contract award, and (iii) the need to maintain timely and uninterrupted service for the millions of riders who rely upon the NYC transit system on a daily basis. The Authority's inability to meet the Commission's deadline cannot be attributed to any lack of effort, intent, or willpower. Rather, as reflected in this waiver request, the Authority has taken a number of meaningful actions, and committed substantial sums, to implement narrowband technology on the Subway Radio System. Most notably, the Authority has required the project contractor to adhere to a tight schedule that accounts for the minimum amount of time reasonably necessary to complete the Narrowband Project. Moreover, the Authority has required the contractor to complete the migration of all outdoor sites first to minimize the risk of interference that may be caused by continued operation in wideband mode after January 1, 2013.

In view of the foregoing, the Authority respectfully requests that the Commission grant its request for a waiver and extension of the deadline in accordance with Sections 1.925 and 1.3 of the Commission's rules, and the guidance set forth in the *Public Notice*. The unique and unusual circumstances in this case would make application of the deadline inequitable, unduly burdensome, and contrary to the public interest. Likewise, imposing the deadline on the

Authority would result in untold harm to residents of the City and the surrounding metropolitan area. The Authority has no reasonable alternative but to seek a waiver. Accordingly, the Authority requests that the Commission grant the waiver relief sought herein.

Respectfully submitted,

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APPENDIX A

APPLICABLE FCC CALLSIGNS OF THE NEW YORK CITY TRANSIT AUTHORITY VHF RADIO SYSTEM WAIVER REQUEST

CALL SIGN	RADIO SERVICE CODE	CURRENT NYCT USER	FREQUENCY ASSIGNED						
KA34484	PW	TB	151.1450	151.1900	151.3100	151.3400			
KB81204	IG	RTO	160.8450	161.1900	161.5050	161.5650			
KB81205	IG	TB	160.3050	160.5000	160.9050	160.9650			
KEM727	PW	RTO	158.8800						
KG9550	PW	RTO	158.7750	158.8050	158.8800				
KGL738	IG	RTO	160.8450	161.5650					
KGL739	IG	RTO	160.8450	161.5650					
KGL741	IG	RTO	160.8450	161.5650					
KJ3732	IG	RTO	160.8450	161.5650					
KLE770	IG	RTO & TB	160.3050	160.9650	161.5050	161.5650			
KLE772	IG	RTO & TB	160.3050	160.9650	161.5050	161.5650			
KLO237	IG	RTO & TB	160.3050	160.5000	160.9050	160.9650	161.1900	161.5050	161.5650
KQT915	IG	RTO & TB	160.3050	160.9650	161.5650				
KSZ887	IG	RTO & TB	160.3050	161.5650					
KTA917	IG	RTO & TB	160.3050	161.5050	161.5650				
KTA918	IG	RTO & TB	160.3050	161.5050	161.5650				
KTA919	IG	RTO & TB	160.3050	161.5050	161.5650				
KTA920	IG	RTO & TB	160.3050	160.9650	161.5050	161.5650			
KTA927	IG	RTO & TB	160.3050	160.9650	161.5050	161.5650			
KTA928	IG	RTO & TB	160.3050	160.9650	161.5050	161.5650			
WNGI988	IG	RTO & TB	160.9650	161.5050					
WNGX515	IG	RTO & TB	160.3050	160.9650	161.1900	161.5050			
WNGX516	IG	RTO & TB	160.5000	160.9050	161.1900	161.5050			
WNGZ991	IG	TB	160.3050						
WNHI787	IG	TB	160.3050	160.5000	160.6950	160.9050	160.9650		
WNSA945	IG	RTO & TB	160.9050	161.5050					
WNZK581	IG	RTO & TB	160.2600	160.4850	160.5300	160.6950	161.1750	161.2500	161.5200
WPEM901	IG	RTO	160.3050	160.5000	160.6950	160.9050	160.9650		

RADIO SERVICE CODE
IG - INDUSTRIAL/BUSINESS POOL, CONVENTIONAL
PW - PUBLIC SAFETY POOL, CONVENTIONAL

CURRENT NYCT USER
RTO – SUBWAYS RAPID TRANSIT OPERATIONS
TB – NYPD TRANSIT BUREA